POWER TRACTOR MOWERS[1]	PICK-UP BALERS			FIELD FORAGE HARVESTERS[2]			MOWER CONDITIONERS[3]			MOTOR TRUCKS			INTERNAL COMBUSTION ENGINES[4]	CHAIN SAWS	
Estimated July 1, 1989 Number	1978 Census Number	1982 Census Number	Estimated July 1, 1989 Number	1978 Census Number	1982 Census Number	Estimated July 1, 1989 Number	1978 Census Number	1982 Census Number	Estimated July 1, 1989 Number	1978 Census Thousands	1982 Census Thousands	Estimated July 1, 1989 Thousands	Estimated July 1, 1989 Number	Estimated July 1, 1989 Number	
5,930	2,609	3,047	3,125	1,309	1,181	1,075	2,023	2,353	2,510	12.3	12.2	11.8	1,225	7,145	Maine
2,710	1,254	1,259	1,195	545	544	510	889	960	995	3.8	4.1	4.0	1,145	2,360	New Hampshire
8,055	4,082	4,167	4,010	2,707	2,569	2,340	3,777	3,866	3,860	6.6	7.5	7.7	1,595	5,940	Vermont
3,555	1,732	1,704	1,505	1,092	1,083	1,025	1,472	1,533	1,550	9.0	9.4	9.3	1,655	4,330	Massachusetts
285	181	205	195	113	93	75	124	146	150	1.3	1.3	1.3	170	600	Rhode Island
3,120	1,509	1,508	1,435	804	773	710	1,063	1,318	1,460	6.6	6.8	6.5	1,450	3,630	Connecticut
49,565	28,853	28,078	26,320	20,298	19,040	17,475	25,390	25,603	25,365	57.6	60.5	61.0	19,270	47,985	New York
4,095	2,194	2,260	2,190	1,093	1,165	1,140	2,275	2,386	2,410	14.4	15.2	15.3	2,125	5,710	New Jersey
54,955	37,288	37,257	35,425	18,891	18,078	16,625	29,419	29,456	29,105	63.8	66.1	66.0	18,330	42,050	Pennsylvania
950	568	531	490	269	249	215	587	519	470	6.2	6.2	6.0	855	2,420	Delaware
10,175	5,581	5,719	5,500	2,852	2,670	2,465	4,653	5,136	5,310	22.8	25.9	26.9	4,145	11,710	Maryland
143,395	**85,851**	**85,735**	**81,390**	**49,973**	**47,465**	**43,655**	**71,672**	**73,276**	**73,185**	**204.4**	**215.2**	**215.8**	**51,965**	**133,880**	**NORTHEAST**
58,105	38,496	39,754	38,415	11,209	11,090	10,490	26,997	26,143	25,500	107.1	107.8	106.2	17,550	58,270	Ohio
45,430	23,838	23,947	22,885	6,912	6,917	6,570	15,733	15,583	15,330	114.4	112.2	109.8	18,150	62,320	Indiana
63,975	30,632	30,463	28,930	11,557	9,972	8,735	21,173	21,867	24,045	150.6	150.6	147.4	27,015	67,770	Illinois
96,540	47,389	47,776	45,960	19,393	17,638	15,950	26,375	28,401	29,300	144.0	147.7	146.4	28,760	53,865	Iowa
78,000	43,981	48,662	48,190	8,704	8,055	7,305	23,469	26,527	27,870	155.9	159.7	159.5	29,700	90,240	Missouri
342,050	**184,336**	**190,602**	**184,380**	**57,775**	**53,672**	**49,050**	**113,747**	**118,521**	**122,045**	**672.0**	**678.0**	**669.3**	**121,175**	**332,465**	**CORN BELT**
43,125	24,536	25,051	24,190	12,704	11,809	10,730	20,696	21,055	21,110	77.4	80.3	80.3	16,340	43,600	Michigan
93,270	58,443	58,042	55,350	43,154	43,880	42,110	51,830	51,630	50,980	98.0	99.5	98.1	31,310	88,490	Wisconsin
86,815	50,165	51,038	49,160	23,341	23,803	22,820	31,714	32,050	31,970	144.1	143.8	140.4	42,495	63,275	Minnesota
223,210	**133,144**	**134,131**	**128,700**	**79,199**	**79,492**	**75,660**	**104,240**	**104,735**	**104,060**	**319.5**	**323.6**	**318.8**	**90,145**	**195,365**	**LAKE STATES**
36,690	15,180	16,628	16,515	5,538	4,839	4,370	6,315	6,181	6,005	107.7	101.1	95.2	32,025	4,085	North Dakota
42,845	14,174	17,966	18,925	11,280	10,568	9,690	5,673	6,958	7,050	66.0	68.0	67.6	21,240	3,150	South Dakota
49,560	16,968	18,906	19,120	13,870	12,538	11,300	14,740	15,497	15,760	118.6	118.9	116.7	29,045	13,455	Nebraska
48,085	29,222	31,998	31,950	10,778	9,367	8,220	17,144	18,932	19,510	160.8	159.4	155.1	37,440	22,195	Kansas
177,180	**75,544**	**85,498**	**86,510**	**41,466**	**37,312**	**33,580**	**43,872**	**47,568**	**48,325**	**453.1**	**447.4**	**434.6**	**119,750**	**42,885**	**GREAT PLAINS**
16,905	9,119	10,550	10,770	2,094	2,323	2,295	5,035	6,033	6,450	19.2	20.5	20.6	4,550	20,780	West Virginia
45,530	31,575	35,143	35,510	7,752	7,910	7,600	23,656	23,805	23,775	119.3	125.2	126.5	14,625	42,625	Kentucky
48,795	22,028	26,506	27,520	5,202	6,313	6,550	16,834	18,734	19,315	96.4	104.7	107.6	11,270	56,510	Tennessee
29,775	17,932	21,805	22,310	6,075	6,209	5,935	12,404	14,659	15,760	62.6	68.0	69.1	10,905	46,240	Virginia
30,260	12,461	12,752	12,120	4,204	3,502	2,940	10,577	10,888	10,835	106.2	103.3	99.2	14,190	83,265	North Carolina
171,265	**93,115**	**106,756**	**108,230**	**25,327**	**26,257**	**25,320**	**68,506**	**74,119**	**76,135**	**403.7**	**421.7**	**423.0**	**55,540**	**249,420**	**APPALACHIAN**
9,310	4,404	4,823	4,680	1,369	1,260	1,135	3,370	4,033	4,320	36.1	34.6	32.9	5,590	23,520	South Carolina
15,515	8,671	10,407	10,720	2,652	2,717	2,610	9,176	9,465	9,450	74.3	72.6	70.1	11,520	32,440	Georgia
3,545	2,787	3,754	4,040	903	861	795	6,406	7,591	8,180	49.4	51.2	51.0	11,000	7,430	Florida
15,180	10,068	11,322	11,325	2,102	2,112	2,010	8,349	8,212	8,025	68.6	67.4	65.4	9,370	30,635	Alabama
43,550	**25,930**	**30,306**	**30,765**	**7,026**	**6,950**	**6,550**	**27,301**	**29,301**	**29,975**	**228.4**	**225.8**	**219.4**	**37,480**	**94,025**	**SOUTHEAST**
20,080	8,286	10,509	11,080	2,003	1,927	1,800	7,294	7,949	8,190	58.0	59.0	58.3	9,020	36,165	Mississippi
10,130	5,666	6,425	6,490	1,299	1,327	1,265	6,587	6,698	6,670	44.9	44.3	43.2	10,740	19,840	Louisiana
19,405	10,783	13,994	15,000	1,882	1,634	1,420	8,366	10,035	10,795	80.7	79.3	76.8	12,170	30,475	Arkansas
49,615	**24,735**	**30,928**	**32,570**	**5,184**	**4,888**	**4,485**	**22,247**	**24,682**	**25,655**	**183.6**	**182.6**	**178.3**	**31,930**	**86,480**	**DELTA STATES**
30,355	19,242	22,690	23,320	2,420	2,491	2,405	14,990	17,107	18,120	118.3	122.8	123.8	18,235	9,825	Oklahoma
44,090	26,382	33,736	34,860	5,339	5,109	4,725	32,449	39,629	36,860	239.0	249.9	261.1	54,425	19,200	Texas
74,445	**45,624**	**56,426**	**58,180**	**7,759**	**7,600**	**7,130**	**47,439**	**56,736**	**54,980**	**357.3**	**372.7**	**384.9**	**72,660**	**29,025**	**S. PLAINS**
20,040	11,692	12,468	12,290	2,086	2,429	2,465	7,304	8,102	8,365	67.2	68.2	67.4	16,600	11,700	Montana
19,980	12,862	12,210	11,350	2,391	2,384	2,260	9,029	8,515	8,135	56.7	57.1	55.9	13,590	13,065	Idaho
5,745	4,468	5,066	5,140	1,261	1,222	1,135	3,433	3,904	4,100	20.0	22.1	22.7	5,375	3,170	Wyoming
14,735	10,374	10,365	9,850	4,355	3,503	2,945	7,259	7,040	6,850	63.4	63.0	61.4	17,465	6,000	Colorado
4,410	3,252	3,403	3,330	774	802	775	2,317	2,395	2,415	23.9	24.6	24.4	6,530	2,975	New Mexico
1,900	1,004	6,942	1,005	298	348	345	780	861	890	15.3	16.6	16.9	4,470	505	Arizona
10,130	6,922	6,965	6,655	1,874	1,978	1,930	5,098	5,547	5,710	21.7	23.3	23.6	5,670	2,340	Utah
1,460	1,470	1,598	1,570	353	437	455	1,245	1,314	1,340	6.0	6.5	6.4	1,325	595	Nevada
78,400	**52,044**	**53,117**	**51,190**	**13,392**	**13,103**	**12,310**	**36,465**	**37,678**	**37,805**	**274.2**	**281.4**	**278.7**	**71,025**	**40,350**	**MT. STATES**
19,405	8,717	9,518	9,420	2,890	3,060	2,990	8,107	9,838	10,640	64.7	69.2	69.6	14,190	22,520	Washington
18,255	8,443	9,730	9,910	2,602	2,555	2,405	7,033	8,528	9,190	54.4	61.2	58.0	18,405	25,570	Oregon
22,095	6,358	6,725	6,625	2,530	2,715	2,675	7,558	9,299	10,150	134.6	147.9	151.9	55,140	31,640	California
59,755	**23,518**	**25,973**	**25,955**	**8,022**	**8,330**	**8,070**	**22,698**	**27,665**	**29,980**	**253.7**	**278.3**	**279.5**	**87,735**	**79,730**	**PACIFIC**
1,362,865	**743,841**	**799,472**	**787,870**	**295,123**	**285,069**	**265,810**	**558,187**	**594,281**	**602,145**	**3,349.9**	**3,426.7**	**3,402.3**	**739,405**	**1,283,625**	**TOTAL**

Equipment on Canadian Farms, 1986

Province	S-P Combines	Pull Combines	S-P Swathers	Pull Swathers	Balers (smaller bales)	Balers (larger bales)	Mower-conditioners	Forage Harvesters	Grain Dryers
Newfoundland	3	-	4	16	149	5	113	30	-
Prince Edward I.	756	369	29	61	1,642	202	1,295	339	357
Nova Scotia	317	61	36	90	2,227	152	1,641	416	124
New Brunswick	490	234	56	161	1,968	183	1,480	382	100
Quebec	5,823	1,285	2,552	1,501	25,428	819	18,836	8,402	5,617
Ontario	18,234	5,506	7,652	2,766	34,101	3,181	22,457	14,513	3,983
Manitoba	15,618	6,328	14,082	10,446	9,860	5,457	5,080	978	3,381
Saskatchewan	35,802	22,343	32,917	37,538	21,991	8,649	9,290	1,560	7,902
Alberta	33,454	9,516	33,760	15,384	24,624	12,954	13,860	3,449	4,690
Brit. Columbia	1,429	366	1,628	1,584	5,997	1,487	5,565	1,863	235
Total	**111,926**	**46,008**	**92,716**	**69,547**	**127,987**	**33,089**	**79,617**	**31,932**	**26,389**

SOURCE: Census of Canadian Agriculture, Statistics Canada, Ottawa, Ont.

Motor Vehicles and Specified Machines on U.S. Farms and Average Prices of Wheel Tractors, January 1, Designated Years[1]

YEAR	TRACTORS (exclusive of steam & garden)[2] Thousands	MOTOR TRUCKS Thousands	GRAIN COMBINES Thousands	CORN PICKERS and PICKER SHELLERS Thousands	PICK-UP BALERS Thousands	FIELD FORAGE HARVESTERS Thousands	GARDEN TRACTORS and MOTOR TILLERS[3] Thousands	WHEEL TRACTORS WHOLESALE PRICES[4] Per Unit Dollars	Horsepower Dollars
1965	4,787	3,030	910	690	751	316	699	$ 3,541	$ 56
1966	4,783	3,017	888	686	752	316	725	$ 3,886	$ 58
1967	4,786	3,009	867	680	748	319	750	$ 4,257	$ 62
1968	4,766	3,016	847	673	739	321	770	$ 4,709	$ 66
1969	4,712	3,004	820	657	725	314	790	$ 4,976	$ 71
1970	4,619	2,978	790	635	708	304	805	$ 5,560	$ 76
1971	4,562	2,985	760	629	698	309	815	$ 6,190	$ 80
1972	4,509	2,993	725	625	687	315	825	$ 6,486	$ 84
1973	4,477	3,006	703	618	680	324	835	$ 6,953	$ 85
1974	4,478	3,020	685	618	677	332	850	$ 7,294	$ 86
1975	4,463	3,032	666	615	666	337	870	$ 8,459	$ 91
1976	4,434	3,043	647	610	642	342	890	$11,220	$112
1977	4,381	3,052	630	605	614	346	905	$12,692	$124
1978	4,350	3,054	615	600	595	345	917	$13,431	$144
1979	4,623	3,350	655	596	744	295	927	$16,512	$149
1980	4,598	3,367	653	592	759	293	933	$18,139	$166
1981	4,573	3,385	650	587	774	291	938	$23,308	$199
1982	4,547	3,405	647	582	788	288	942	$25,941	$204
1983	4,520	3,427	644	576	799	285	944	$34,198	$237
1984	4,497	3,449	642	569	810	282	945	$37,434	$261
1985	4,480	3,467	640	561	822	280	942	$40,730	$290
1986	4,465	3,460	637	552	819	278	938	....	....
1987	4,443	3,446	632	540	812	273	933	....	....
1988	4,430	3,432	629	531	801	270	930	....	....
1989	4,415	3,415	626	521	793	267	926	....	....

[1]**SOURCE:** Reports of the USDA and the Bureau of the Census. On-farm data after 1970, except 1975 and 1979, are estimated by I&T. [2]Consists of Wheel and Crawler Tractors. [3]Motor Tillers included after 1964. [4]Estimated at wholesale level by dividing Value of Manufacturers' Shipments by Units Shipped and by Maximum Belt Horsepower, data are published in "Current Industrial Reports" of the Bureau of the Census. Not available after 1985. Note: Data from the 1978 Census (Jan. 1, 1979 above) and later years, reflect changes in sample coverage and are not fully comparable with earlier years.

Farm Wheel Tractor Retail Sales By State, 1984-1988

Units

State	1984 2-wheel Drive	1984 4-wheel Drive	1984 Total Tractors	1985 2-wheel Drive	1985 4-wheel Drive	1985 Total Tractors	1986 2-wheel Drive	1986 4-wheel Drive	1986 Total Tractors	1987 2-wheel Drive	1987 4-wheel Drive	1987 Total Tractors	1988 2-wheel Drive	1988 4-wheel Drive	1988 Total Tractors
Alabama	2,653	10	2,663	2,872	2	2,874	3,041	—	3,041	2,943	1	2,944	2,959	2	2,961
Alaska	71	—	71	39	—	39	22	—	22	20	—	20	12	—	12
Arizona	782	30	812	1,240	29	1,269	657	16	673	638	2	640	677	8	685
Arkansas	3,714	91	3,805	3,683	70	3,753	3,154	55	3,209	3,083	31	3,114	3,145	105	3,250
California	5,946	186	6,132	4,931	74	5,005	5,138	73	5,211	4,970	49	5,019	5,963	87	6,050
Colorado	1,234	106	1,340	983	89	1,072	711	50	761	682	59	741	750	98	848
Connecticut	618	3	621	715	1	716	937	—	937	1,091	1	1,092	1,065	—	1,065
Delaware	248	7	255	286	7	293	351	6	357	320	4	324	369	12	381
Florida	4,614	19	4,633	4,543	30	4,573	4,732	31	4,763	4,375	55	4,430	4,615	68	4,683
Georgia	4,655	10	4,665	5,242	5	5,247	5,077	6	5,083	5,173	3	5,176	4,644	5	4,649
Hawaii	116	5	121	126	9	135	142	4	146	149	4	153	194	2	196
Idaho	1,062	117	1,179	786	83	869	483	35	518	497	17	514	490	23	513
Illinois	3,958	312	4,270	3,327	252	3,579	3,182	155	3,337	3,204	116	3,320	3,070	173	3,243
Indiana	2,801	135	2,936	2,789	113	2,902	2,784	68	2,852	2,712	46	2,758	2,348	100	2,448
Iowa	2,964	129	3,093	1,894	68	1,962	2,022	69	2,091	2,433	64	2,497	2,516	111	2,627
Kansas	2,199	342	2,541	1,739	248	1,987	1,585	134	1,719	1,591	132	1,723	1,778	268	2,046
Kentucky	2,945	15	2,960	3,044	23	3,067	2,643	11	2,654	2,519	8	2,527	2,506	14	2,520
Louisiana	3,894	48	3,942	3,419	66	3,485	2,602	15	2,617	2,430	23	2,453	2,212	66	2,278
Maine	615	—	615	625	—	625	806	—	806	824	—	824	903	—	903
Maryland	1,683	7	1,690	2,139	3	2,142	2,081	1	2,082	2,279	2	2,281	2,022	3	2,025
Massachusetts	621	—	621	783	—	783	999	—	999	1,188	—	1,188	1,043	2	1,045
Michigan	2,751	132	2,883	2,975	74	3,049	3,051	51	3,102	2,624	34	2,658	2,782	56	2,838
Minnesota	2,441	295	2,736	1,714	202	1,916	1,651	183	1,834	1,816	153	1,969	1,777	227	2,004
Mississippi	3,030	25	3,055	3,172	20	3,192	2,516	7	2,523	2,317	16	2,333	2,351	21	2,372
Missouri	3,036	75	3,111	3,159	35	3,194	3,290	38	3,328	3,266	43	3,309	3,268	97	3,365
Montana	677	195	872	602	122	724	323	103	476	340	76	416	347	79	426
Nebraska	1,598	99	1,697	963	63	1,026	1,258	66	1,324	1,314	64	1,378	1,585	90	1,675
Nevada	82	6	88	113	4	117	102	2	104	99	1	100	87	1	88
New Hampshire	712	1	713	946	—	946	1,139	—	1,139	1,293	—	1,293	1,117	1	1,118
New Jersey	1,039	1	1,040	1,062	1	1,063	1,275	—	1,275	1,337	—	1,337	1,395	1	1,396
New Mexico	371	19	390	529	18	547	418	9	427	444	5	449	456	6	462
New York	3,296	45	3,341	3,717	21	3,738	4,065	24	4,089	4,074	6	4,080	3,937	16	3,953
North Carolina	4,571	12	4,583	4,478	9	4,487	4,511	7	4,518	5,334	3	5,337	5,218	4	5,222
North Dakota	1,112	457	1,569	917	351	1,268	892	292	1,184	1,092	223	1,315	623	285	908
Ohio	3,887	108	3,995	4,537	56	4,593	4,364	67	4,431	4,276	25	4,301	3,758	33	3,791
Oklahoma	2,364	213	2,577	2,203	167	2,370	1,899	82	1,981	1,857	81	1,938	1,729	164	1,893
Oregon	1,705	41	1,746	1,606	36	1,642	1,699	24	1,723	1,579	11	1,590	1,612	28	1,640
Pennsylvania	3,717	21	3,738	4,095	16	4,111	4,524	15	4,539	4,640	9	4,649	4,462	11	4,473
Rhode Island	85	—	85	97	—	97	117	—	117	119	—	119	115	—	115
South Carolina	1,904	2	1,906	2,171	5	2,176	2,033	1	2,034	2,127	2	2,129	2,646	5	2,651
South Dakota	1,060	169	1,229	809	158	967	934	149	1,083	1,130	118	1,248	837	179	1,016
Tennessee	3,936	15	3,951	4,522	16	4,538	4,207	13	4,220	4,472	6	4,478	4,015	15	4,030
Texas	12,338	226	12,564	13,252	192	13,444	9,849	77	9,926	8,183	95	8,278	6,839	150	6,989
Utah	688	15	703	625	6	631	480	4	484	308	1	309	283	5	288
Vermont	509	5	514	600	2	602	625	—	625	639	—	639	612	—	612
Virginia	2,736	5	2,741	3,253	5	3,258	3,309	6	3,315	3,704	1	3,705	3,722	2	3,724
Washington	1,956	105	2,061	1,652	83	1,735	1,450	39	1,489	1,433	30	1,463	1,325	53	1,378
West Virginia	525	1	526	685	—	685	925	1	926	850	—	850	685	—	685
Wisconsin	2,821	82	2,903	2,615	60	2,675	2,225	41	2,266	1,900	23	1,923	1,844	40	1,884
Wyoming	302	26	328	168	18	186	149	7	156	131	8	139	105	12	117
U.S. Govt.	530	—	530	13	—	13	29	—	29	183	2	185	368	1	369
Miscellaneous	590	3	593	306	—	306	250	—	250	529	—	529	835	—	835
TOTAL	**113,759**	**3,975**	**117,734**	**112,761**	**2,912**	**115,673**	**106,758**	**2,037**	**108,795**	**106,531**	**1,653**	**108,184**	**104,017**	**2,729**	**106,746**

Source: Farm & Industrial Equipment Institute. Figures do not include garden tractors, motor tillers or contractor's off-highway types.

Retail Sales of Selected Farm Equipment — Jan.-Dec., 1986, 1987 and 1988[1]

(In Units)

STATE	COMBINES SELF-PROPELLED			HAY BALERS[2]			WINDROWERS SELF-PROPELLED POWER UNITS			WINDROWERS SELF-PROPELLED TOTAL HEADS			GRINDER-MIXERS			SHEAR-BAR FORAGE HARVESTERS[3]			MOWER CONDITIONERS ALL-TYPES		
	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988
Alabama	14	10	15	78	89	86	2	—	—	2	—	—	28	28	27	6	9	2	108	80	106
Alaska	1	—	—	—	2	2	—	—	1	—	—	1	—	1	1	—	—	1	—	3	—
Arizona	13	4	2	22	23	11	30	32	30	35	33	30	2	—	—	4	5	1	4	2	3
Arkansas	184	244	250	110	68	103	2	—	3	2	—	3	10	5	15	—	4	—	222	140	146
California	60	41	47	85	65	67	153	128	195	166	142	224	1	2	—	52	34	26	54	29	25
Colorado	90	81	83	141	138	164	61	57	64	70	62	74	9	11	8	12	5	20	80	84	100
Connecticut	—	—	—	27	19	37	—	—	—	—	—	—	—	1	—	17	17	18	57	53	61
Delaware	7	8	17	6	16	13	—	—	1	—	—	1	—	2	3	3	3	6	11	16	16
Florida	5	3	5	62	42	54	—	1	—	—	1	—	3	3	5	6	6	4	54	25	28
Georgia	33	47	73	100	135	122	—	—	1	1	—	1	29	26	31	7	19	12	103	98	100
Hawaii	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Idaho	71	70	43	140	130	175	73	85	84	93	89	94	—	2	4	7	11	16	50	41	54
Illinois	1,120	940	653	105	117	148	3	4	3	3	6	4	176	209	210	46	61	76	302	364	390
Indiana	602	542	397	143	139	149	—	1	7	1	1	8	133	182	174	27	45	15	341	343	294
Iowa	854	881	833	127	102	157	30	28	12	29	30	15	295	553	595	67	72	94	429	518	571
Kansas	484	467	457	73	103	111	64	66	99	82	71	105	35	46	65	19	27	29	124	247	256
Kentucky	63	66	73	141	168	149	—	2	—	—	2	—	61	60	90	32	48	43	518	529	573
Louisiana	32	35	77	58	38	53	—	—	—	—	—	—	4	4	6	5	5	—	47	45	20
Maine	—	—	—	31	35	27	—	—	—	—	—	—	—	—	—	18	19	14	129	120	107
Maryland	53	30	42	66	73	81	6	7	10	6	7	10	6	13	11	34	34	24	100	108	136
Massachusetts	—	—	—	31	25	28	1	—	—	1	—	—	—	—	2	15	10	17	55	65	52
Michigan	144	129	81	197	125	142	13	9	13	18	8	14	77	83	60	112	100	104	363	353	346
Minnesota	462	457	374	308	233	314	56	50	54	65	57	53	137	175	222	153	174	181	595	510	585
Mississippi	86	78	89	38	44	44	—	—	—	—	—	—	9	11	10	6	7	7	52	43	54
Missouri	397	391	306	166	179	225	8	4	5	10	5	4	71	88	133	23	20	26	541	565	634
Montana	163	140	59	113	90	82	94	88	92	119	113	117	4	7	18	17	19	16	84	64	79
Nebraska	603	591	597	43	52	62	35	83	66	54	95	86	80	121	174	65	56	78	223	240	303
Nevada	—	—	—	22	17	12	20	14	22	26	19	24	—	—	—	3	7	1	13	13	13
New Hampshire	—	—	—	31	43	46	—	—	—	—	—	—	—	1	—	16	12	11	107	102	103
New Jersey	4	4	8	25	21	24	—	—	—	—	—	—	9	6	3	8	7	6	21	38	37
New Mexico	10	3	4	94	65	88	26	35	22	28	34	24	1	2	—	4	3	3	25	22	17
New York	29	32	30	287	267	296	14	17	13	17	17	15	25	23	32	221	256	256	675	725	718
North Carolina	98	93	120	157	177	157	—	—	1	—	1	1	19	21	27	34	32	23	302	287	258
North Dakota	433	444	157	16	6	11	95	72	42	130	86	50	30	55	59	44	35	43	124	141	116
Ohio	479	418	237	247	239	217	13	10	4	13	10	2	129	179	145	84	88	101	480	590	476
Oklahoma	71	61	66	110	128	161	21	34	31	22	35	38	11	16	19	4	3	2	229	196	219
Oregon	40	77	66	143	125	126	60	129	122	93	167	152	2	3	4	16	22	23	92	104	120
Pennsylvania	109	54	54	352	389	375	17	23	39	38	23	40	98	120	83	173	182	170	635	776	723
Rhode Island	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—
South Carolina	26	36	65	41	66	50	—	—	1	—	—	1	7	14	21	4	8	5	86	79	80
South Dakota	278	270	175	34	26	36	96	77	79	106	108	90	79	92	140	63	74	134	181	130	159
Tennessee	53	45	65	160	182	187	—	—	1	—	—	1	35	59	57	32	19	23	431	402	430
Texas	206	152	150	396	280	281	23	20	18	26	21	20	53	55	54	21	16	8	611	490	485
Utah	7	7	3	113	129	145	51	30	52	54	36	57	4	8	7	23	21	32	97	84	81
Vermont	1	1	—	45	49	34	2	3	3	3	4	2	—	—	—	61	61	67	166	219	163
Virginia	30	24	33	126	146	129	2	3	1	2	3	2	23	25	21	66	48	52	427	515	437
Washington	59	67	111	158	106	179	50	62	81	74	76	94	4	1	1	17	23	28	82	81	84
West Virginia	1	1	—	59	81	59	—	—	—	—	—	—	9	11	9	14	12	10	87	124	86
Wisconsin	176	122	73	632	496	458	79	82	98	85	89	97	88	151	107	498	528	530	1,324	1,399	1,166
Wyoming	7	6	5	67	58	58	35	46	50	43	50	59	1	3	3	4	3	1	31	28	23
U.S. Govt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Miscellaneous[4]	—	—	—	6	6	—	—	—	—	—	—	—	—	—	—	1	—	—	24	9	10
TOTAL	**7,660**	**7,172**	**5,995**	**5,734**	**5,352**	**5,735**	**1,255**	**1,287**	**1,420**	**1,518**	**1,501**	**1,611**	**1,797**	**2,478**	**2,656**	**2,164**	**2,280**	**2,405**	**10,898**	**11,239**	**11,043**

Source: Farm & Industrial Equipment Institute. [1]Includes revisions for prior months. [2]For making bales of under 200 lbs. [3]Pull-type, mounted, self-propelled. [4]Sales reported as miscellaneous are retail sales which cannot be classified by state or as U.S. Government. They include sales and dispositions that do not go through usual marketing channels such as gifts to non-profit organizations, intra-plant or company transfers, etc.

Dollar Value of Farm Equipment Imports by Country of Origin, Jan. 1982-June 1989

(In Thousands)

Country	Jan.-Dec. 1982	Jan.-Dec. 1983	Jan.-Dec. 1984	Jan.-Dec. 1985	Jan.-Dec. 1986	Jan.-Dec. 1987	Jan.-Dec. 1988	Jan.-June 1989
Canada	$487,286	$453,551	$576,583	$415,527	$366,074	$497,337	$575,949	$300,791
Mexico	11,349	18,563	10,099	8,159	6,218	11,419	37,008	21,360
Brazil	4,780	6,424	11,395	12,214	10,967	18,877	27,632	11,081
Sweden	3,023	2,873	4,002	3,464	4,538	4,731	4,805	2,238
Denmark	4,910	5,856	7,670	9,331	7,290	9,676	13,106	5,240
Netherlands	13,924	32,831	46,912	33,945	29,778	31,513	33,422	17,961
United Kingdom	93,806	163,678	217,201	207,020	234,406	256,182	366,337	195,315
Belgium	25,730	23,691	27,697	29,389	42,537	46,125	64,028	40,161
France	30,804	41,333	72,605	68,681	64,556	64,776	118,789	65,257
West Germany	169,087	248,015	223,651	222,756	252,740	244,560	289,718	157,000
Austria	—	—	2,673	2,540	3,455	4,480	6,279	1,800
Yugoslavia	—	—	38	205	1,251	7,766	8,968	2,077
Hungary	7,564	2,404	11,665	5,444	1,816	5,917	5,620	3,860
Czechoslovakia	1,113	1,892	5,888	5,926	6,197	3,759	6,849	4,274
Romania	15,461	6,088	4,701	4,409	1,921	5,326	5,710	3,331
Italy	95,092	99,219	152,409	122,300	118,808	128,651	154,915	87,661
Spain	6,541	2,946	7,124	3,996	5,978	6,254	7,436	5,775
Israel	2,677	2,988	4,183	7,619	7,475	8,629	9,171	4,752
New Zealand	9,792	11,885	11,220	10,725	8,123	11,012	12,903	2,995
Australia	4,662	3,209	4,568	5,421	5,941	7,159	8,429	4,749
Japan	181,056	204,818	309,757	355,577	418,780	420,852	388,774	209,136
China (Taiwan)	2,913	3,617	5,175	5,132	6,066	7,297	8,322	4,716
China (P.R.C.)	1,381	1,949	3,113	2,568	3,002	5,408	6,345	2,493
Korea	NA	852	742	1,256	5,667	7,456	19,842	17,378
U.S.S.R.	NA	1,255	852	1,266	3,731	5,394	9,599	7,421
TOTAL	**$1,179,734**	**$1,347,483**	**$1,729,402**	**$1,557,623**	**$1,630,628**	**$1,834,925**	**$2,206,957**	**$1,191,445**

Source: U.S. Dept. of Commerce, International Trade Administration, Office of Capital Goods and International Construction.

Imports of Farm Equipment by Product, 1986-1988

Product	Jan.-Dec. 1986 Quantity	Jan.-Dec. 1986 Value in Thousands of Dollars	Jan.-Dec. 1987 Quantity	Jan.-Dec. 1987 Value in Thousands of Dollars	Jan.-Dec. 1988 Quantity	Jan.-Dec. 1988 Value in Thousands of Dollars
Knives & Cutting Blades	8,741,126	$ 8,202	9,628,822	$ 10,497	8,293,169	$ 10,156
Plows & Listers	3,363	7,962	5,532	11,246	2,482	8,429
Cultivators & Weeders	32,017	25,127	52,430	30,088	56,922	32,044
Parts of Plows, Cultivators, Weeders & Listers	—	23,536	—	30,362	—	41,256
Harrows, Rollers, Stalk Cutters, Soil Pulverizers	32,442	16,987	23,565	24,614	33,147	27,020
Parts of Harrows, Rollers, Stalk Cutters, etc.	—	12,157	—	24,224	—	31,567
Planting, Seeding & Fertilizing Machinery	30,288	24,074	34,137	31,550	44,900	28,168
Parts of Planting, Seeding & Fertilizing Machinery	—	9,858	—	11,107	—	11,130
Haying Machinery other than Mowers	5,347	10,588	7,650	8,002	8,217	10,561
Mowers except Lawn Mowers	19,060	30,191	21,865	33,601	36,236	46,867
Harvesting Machines, NES	6,858	47,808	8,248	58,184	8,624	55,789
Parts of Harvesting Machines	—	57,807	—	61,911	—	82,905
Farm Wagons & Carts	3,455	3,345	3,595	4,006	4,839	6,828
Agricultural Machines & Implements, NES	—	143,876	—	161,517	—	184,730
Parts of Agricultural Machines, NES	—	82,488	—	129,033	—	151,677
Tractors, Agricultural, Wheel-Type New, excluding Industrial*	127,964	807,047	130,734	866,824	101,922	1,056,533
Parts for Agri. Tractors	—	278,482	—	299,551	—	384,454
Walk-Behind Rotary Tillers	16,035	2,470	11,545	3,302	16,431	6,068

Source: U.S. Dept. of Commerce, International Trade Administration, Office of Capital Goods and International Construction. NES — Not elsewhere specified. *Use of the term "industrial" here is understood to refer to such machines as forklifts but not to industrial tractors as commonly defined in the farm and industrial equipment industry.

Imports of Farm Equipment by Product, Jan.-June, 1989

Product	Quantity	Value in Thousands of Dollars
Knives, Cutting Blades	3,934,858	$ 6,002
Moldboard Plows (excluding listers)	292	467
Disk Plows	16,668	791
Other Plows	4,995	10,558
Disk Harrows	14,264	30,868
Harrows & Scarifiers, NES	34,587	7,236
Tillers, rotary, walk.	35,274	5,368
Cultivators, tractor-drawn or mounted	5,462	15,790
Other Cults., Weeders & Hoes, NES	13,594	8,356
Planters, Transplanters	13,244	6,974
Seeders	5,123	6,989
Manure Seeders & Fert. Distributors	30,016	9,503
Other machines for soil prep., cultivation	49,791	22,879
Parts of Plows	—	16,501
Parts or harrows, scarifiers, cults., etc.	—	38,514
Parts of seeders, planters, transplanters, spreaders, dists.	—	9,151
Parts of other machines for soil prep., cult.	—	28,687
Mowers, rotary cutter, tractor-drawn	21,500	29,553
Mowers, other, tractor-drawn or mtd.	7,997	11,618
Mowers, incl. cutterbar, tractor-mounted	4,371	9,649
Balers	531	3,819
Other Haying Machines	6,580	7,233
Combines, self-prop.	383	7,777
Combines, pull-type	961	1,603
Threshing Machines	330	1,437
Harvesters, root crop	114	191
Forage Harvesters	145	553
Other Harvesting Machines	2,936	14,832
Parts of haying machinery	—	5,841
Parts of mowers, combines & threshers	—	53,503
Tractors, crawler, agric.		
Under 125 HP	3,227	80,052
125-159 HP	996	10,030
160-259 HP	263	6,148
260 HP and over	64	489
Used	394	2,088
Tractors, wheel, new	46,428	485,076
Tractors, wheel, used	1,028	7,224
Parts of ag. tractors	—	164,183
Wagons and Carts	11,826	2,638
Parts of wagons, carts	—	1,291

New Agricultural Tractor Imports, Jan., 1988-June, 1989

(In Units)

	Country of Origin	Under 40 HP	40-79 HP	80-99 HP	100 HP & Over	Other*	Totals
Jan.-June, 1989	Belgium	10	—	1	971	1	983
	Brazil	—	31	11	16	6	64
	Canada	30	64	5	39	844	982
	Czechoslovakia	171	67	65	15	—	318
	France	4	32	38	147	5	226
	Germany, West	10	1,903	1,289	130	16	3,348
	Italy	538	211	116	251	313	1,429
	Japan	16,838	517	110	28	1,043	18,536
	Korea	173	—	—	—	—	173
	Mexico	1	667	87	64	1	820
	Romania	57	—	—	—	—	57
	U.S.S.R.	118	13	811	133	475	1,735
	United Kingdom	2,621	2,757	1,571	114	679	7,742
	Yugoslavia	86	50	—	—	2	138
	Totals	**20,721**	**16,257**	**4,104**	**1,909**	**3,437**	**46,428**
1988	Belgium	225	8	1,761	13	5	2,012
	Brazil	3	970	56	—	121	1,150
	Canada	75	140	101	1,195	1,585	3,096
	China	—	—	—	—	150	150
	Czechoslovakia	—	516	10	—	614	1,140
	France	70	51	391	3	42	557
	Germany, West	19	7,832	2,222	—	489	10,562
	Italy	47	690	247	1	591	1,576
	Japan	40,950	3,193	296	1	5,454	49,894
	Korea	656	412	—	—	4	1,072
	Mexico	2	1,352	1	—	1	1,356
	Netherlands	9	82	15	—	1	107
	Romania	278	380	—	—	705	1,363
	U.S.S.R.	1,314	1,505	129	—	232	3,180
	United Kingdom	4,376	15,122	2,259	1	1,160	22,918
	Yugoslavia	389	1,012	17	7	180	1,605
	Totals	**48,491**	**33,262**	**7,506**	**1,253**	**11,410**	**101,922**

Source: U.S. Dept. of Commerce, International Trade Administration, Office of Capital Goods & International Construction. *For 1988, Other includes units whose horsepower is not specifically provided, and including garden-type tractors and roto-tillers. For 1989, it includes units whose horsepower is not specifically provided, tractors without PTO and garden tractors, but not roto-tillers.

Shipments Of Farm Machines And Equipment In Units (1982-1987)

Type of farm equipment	1987	1986	1985	1984	1983	1982
Balers, hay (all types):	10,733	10,556	7,542	10,106	6,681	10,130
Blowers (includes forage type, combination grain-forage type).	2,907	2,375	2,636	3,939	3,825	3,674
Cabs, farm tractor	3,499	2,027	2,932	8,397	12,757	19,674
Cabs, other equipment				580	671	4,739
Combines, grain, pull-type and self-propelled	9,484	8,288	7,027	11,296	13,673	22,726
Corn heads	4,485	4,291	2,829	4,388	4,121	7,228
Cultivators, corn and cotton types	6,906	4,110	8,168	9,419	8,510	14,622
Cultivators, field:						
Pull-type, folding	2,940	1,504	3,897	6,655	4,921	6,493
Mounted and non-folding pull type	1,258	1,313	1,646	2,740	2,252	2,024
Cultivators, rotary	1,072	1,058	3,282	5,028	5,041	9,986
Cultivators and weeders, other	10,901	11,891	12,818	17,040	17,519	24,347
Cutters and shredders or rotary mowers (pto):						
Flail-type	2,913	1,434	4,523	19,786	17,499	11,451
Horizontal blade-type	140,462	100,854	98,459	94,452	88,520	68,433
Diggers (shakers, windrowers), combines, peanut	1,031	1,148	1,296	1,145	1,055	974
Distributors (fertilizer):						
Dry	5,206	4,545	6,143	8,205	7,159	7,157
Liquid	2,031	2,470	4,715	7,581	6,105	5,952
Anhydrous ammonia	933	1,247	1,563	2,359	1,697	3,104
Dryers, grain, hay and seed batch type, pto or						
electric-motor operated	2,455	3,900	3,983	1,658	1,310	4,347
Continuous flow-type	544	765	695	942	452	835
Heated air units	3,588	6,378	9,818	7,198	7,361	22,178
Dusters, power, all types	1,277	901	971	134	98	493
Elevators, portable:						
Single chain	1,627	1,467	2,839	3,057	2,721	3,307
Double chain	6,139	8,482	5,887	1,796	2,218	2,998
Auger-type, 6-in. dia	9,269	8,188	7,939	11,468	10,255	13,874
Auger-type, 6-in. dia	7,434	8,641	6,578	6,351	6,191	7,891
Auger-type, over 6-in. dia	9,776	8,953	7,167	9,928	10,463	18,354
Elevators, stationary and other	44,404	60,069	37,749	36,229	32,762	97,680
Fans, crop drying and aeration	22,151	37,123	12,850	9,851	16,979	37,263
Grain drills, fixed-frame, all types	5,113	4,492	7,159	12,782	10,043	17,331
Grain heads for combines	9,212	9,835	9,978	14,151	14,699	24,656
Grinder-mixers, stationary and portable	3,406	1,717	1,467	2,907	4,987	4,653
Harrows, disk	11,498	12,048	17,908	25,330	23,157	27,448
Harrow sections (spike-, spring-, tine-tooth and power)	17,052	15,274	21,068	42,482	42,202	59,404
Harrows, other; rollers, pulverizers	7,583	6,325	9,388	19,051	20,352	20,982
Harvesters, beet and potato	260	195	345	486	441	586
Harvesters, forage, shear-bar type,						
self-propelled and pull	2,186	1,997	2,647	3,707	4,406	5,316
Harvesting machinery, other	2,915	2,986	4,073	3,989	3,028	5,031
Levelers or scrapers	2,065	1,992	2,034	4,199	4,971	4,089
Loaders, field, for baled hay	1,513	1,143	1,488	1,916	2,000	2,929
Loaders, tractor mounted, farm	14,078	20,960	17,900	26,153	18,547	17,243
Mills, feed, farm size (includes grinders and crushers						
of the hammer, burr or roller types)	2,537	2,073	2,416	2,623	3,334	4,206
Mixers, feed, farm size	1,983	1,360	1,671	1,894	1,886	2,293
Mowers, cutter bar-type	2,302	2,665	3,934	5,443	4,515	6,550
Mower-conditioners, self-propelled and pull-type	10,733	10,556	12,397	19,218	15,048	20,051
Planters, row crop, all types (quantity in number of rows)	34,352	20,311	37,417	58,674	34,530	108,394
Plows, chisel or sweep type:						
Pull-type	1,924	1,875	2,389	4,001	3,681	4,910
Mounted	1,777	930	1,477	2,065	2,119	4,061
Plows, disk-chisel combination	1,904	1,911	2,976	4,763	3,569	4,105
Plows, subsoiler	1,202	1,000	2,208	(NA)	(NA)	(NA)
Plows, terracing and ditching	294	417	753	1,029	1,057	1,039
Plows, moldboard, all types	1,327	1,902	1,902	4,566	(NA)	(NA)
Plows, middle busters and disk bedders	1,495	1,853	2,469	6,483	3,385	(NA)
Rakes, hay, side-delivery	4,173	5,339	8,072	9,069	7,266	10,089
Sprayers, field and row crop type:						
Power, self-propelled	1,151	1,057	1,898	1,740	1,202	2,305
Power, tractor-mounted	8,417	8,604	14,146	17,205	16,024	18,589
Power, non-tractor-mounted	4,195	4,438	5,127	6,492	5,231	5,197
Sprayers, power, not field or row crop type	6,167	6,122	4,674	4,930	5,246	6,660
Sprayers, power, air-carried	1,647	1,993	2,603	3,650	3,576	5,742
Spreaders, manure:						
Conveyor type	9,379	8,279	6,586	8,018	9,177	9,067
Tank type	2,415	2,440	2,371	3,448	2,274	2,533
Terracers, blade, or scrapers	54,879	43,679	48,071	50,645	35,483	33,651
Tillage equipment, combination roller/harrows, disk						
or coulter, field cultivators, disk or coulter/spring tooth	2,868	3,530	5,094	5,341	3,298	3,325
Tool bars, basic units, pull, mounted	1,402	1,511	1,729	1,663	1,267	3,446
Tractors, wheel, farm-type, 2-wheel drive,						
including front-wheel assist.						
Under 100 pto horsepower	9,323	13,017	12,653	15,706	14,286	20,685
100 pto horsepower and over	9,393	9,316	16,072	30,310	26,893	36,891
4-wheel drive	3,656	1,893	2,624	4,955	4,787	7,258
Wagons, farm type, chassis only, and trailer gear	23,511	18,411	17,442	24,471	21,540	24,880
Wagon boxes and racks for mounting on wagons and trailer gear						
Manual unloading or dump	15,365	13,013	14,032	14,423	10,454	9,675
Gravity unloading, grain type	8,383	7,545	5,712	6,687	5,807	9,361
Power unloading	9,667	8,694	7,912	9,304	10,040	10,310
Wagon boxes with integral running gear	2,646	1,818	2,205	2,380	2,828	3,385

In some cases, I&T has combined data because of space limitations. If you need more information from MA-35A, write us.
DATA: Current Industrial Reports, Series MA-35A, Bureau of the Census, NA -Not available or not applicable.

Value of U.S. Farm Ec
by Countries of

(Value in Thousand

Country	1985	1986
Western Hemisphere		
Canada	$791,762	$649,405
Mexico	214,838	76,496
Guatemala	3,719	5,034
Honduras	3,884	3,486
El Salvador	2,397	2,471
Costa Rica	5,073	3,718
Panama	3,396	5,057
Dominican Republic	4,934	11,925
Colombia	11,989	12,349
Jamaica	3,210	2,537
Venezuela	43,193	54,116
Brazil	17,707	18,447
Argentina	5,283	4,695
Bolivia	3,382	3,127
Chile	7,385	5,638
Ecuador	11,056	11,044
Peru	4,079	6,131
Paraguay	1,653	3,156
Europe		
Denmark	1,983	2,933
Sweden	3,445	3,366
United Kingdom	53,285	53,344
Netherlands	6,850	12,463
Belgium-Luxemburg	23,595	40,770
France	60,232	68,371
West Germany	56,817	51,695
Hungary	12,741	13,151
Switzerland	2,441	2,701
Spain	9,760	20,838
Italy	7,572	13,150
Greece	18,094	5,045
Soviet Union	—	10,673
Yugoslavia	—	2,924
Middle East		
Israel	13,844	7,459
Saudi Arabia	96,269	73,559
Turkey	1,975	3,534
Jordan	2,525	942
Asia and Pacific		
Thailand	687	942
Singapore	4,315	5,264
China (Taiwan)	2,635	2,727
China (P.R.C.)	6,545	11,950
Philippines	1,967	2,297
Korea	3,294	2,706
Japan	17,458	18,876
Australia	141,506	47,670
New Zealand	3,723	2,706
Africa		
Algeria	4,418	6,168
Morocco	4,148	526
Sudan	2,163	3,811
Nigeria	5,856	5,967
Egypt	22,510	15,876
Rep. South Africa	29,370	25,011
Total U.S. Exports, Farm & Industrial Equipment	**$1,854,772**	**$1,466,690**

Source: U.S. Dept. of Commerce, International Trade Admin., Office of Capital Goods and International Construction.

Value of Shipments, 1983-1987
Farm Tractors, Farm Machinery And Garden Equipment
Including Parts, Attachments

(In Thousands of Dollars)

Type of product	1987	1986	1985	1984	1983	1982
Wheel tractors farm type	**1,043,372**	**893,432**	**1,154,527**	**2,045,298**	**1,720,680**	**2,215,466**
Planting, seeding and fertilizing machinery	417,799	371,210	453,250	601,099	447,490	673,080
Harrows, rollers, pulverizers, stalk cutters	106,341	99,238	166,014	242,884	212,508	258,551
Plows	74,701	75,310	110,984	152,464	129,746	151,887
Harvesting machinery	1,280,016	1,230,124	1,190,831	1,424,639	1,468,807	2,069,585
Haying machinery	397,027	383,434	498,116	611,568	541,899	545,099
Farm dairy machines and equipment	86,584	77,131	92,308	105,430	116,133	110,656
Sprayers and dusters	224,470	212,566	244,412	252,992	228,465	257,882
Farm elevators and blowers	79,044	82,049	66,877	69,773	72,576	112,436
Cultivators and weeders	104,493	81,103	139,985	175,355	132,889	202,153
Machines for preparing crops for market or use	209,373	203,657	193,727	197,790	194,556	282,420
Farm poultry equipment	116,663	93,420	109,000	120,646	102,443	110,409
Hog equipment	64,983	41,964	35,938	44,038	50,490	41,946
Other barn and barnyard equipment	177,189	129,146	156,768	168,912	184,566	202,249
Stalk shredders and cutters or rotary mowers	189,275	112,073	120,581	126,797	128,443	101,971
Farm wagons, other farm transportation equipment	132,967	109,291	105,480	133,386	140,300	172,989
Irrigation systems	213,087	160,417	186,654	364,138	330,675	241,395
Total farm machinery	**4,917,364**	**4,355,565**	**5,402,166**	**7,170,967**	**6,475,838**	**7,987,963**
Total agricultural equipment	**5,960,736**	**5,248,997**	**6,556,693**	**9,216,265**	**8,196,518**	**10,203,429**
Commercial turf, mowing equipment	390,041	347,482	317,566	280,891	227,531	199,246
Other turf, grounds care equipment	75,594	65,354	59,148	52,872	35,641	38,543
Total commercial grounds equipment	**465,635**	**412,836**	**376,704**	**333,763**	**263,172**	**237,789**
Consumer nonriding lawn, garden, snow equipment	1,928,198	1,743,210	1,688,642	1,614,573	1,372,463	1,283,718
Consumer riding lawn, garden, snow equipment	1,925,467	1,642,630	1,466,472	1,363,481	1,102,952	964,550
Total lawn & garden equipment	**3,853,665**	**3,385,840**	**3,155,114**	**2,978,045**	**2,475,415**	**2,248,268**
Total farm tractors, farm machinery, commercial and consumer equipment	**10,280,054**	**9,047,653**	**10,088,611**	**12,528,073**	**10,935,105**	**12,689,486**

uipment Exports Destination

of Dollars)

1987	1988	Jan.-June, 1989
$646,049	$584,645	$386,844
67,894	121,734	74,429
4,603	5,214	3,019
4,761	6,193	3,949
2,366	2,230	1,682
3,954	5,171	3,863
7,811	3,449	1,270
14,502	19,819	8,368
17,973	17,050	7,386
5,797	3,109	4,523
57,265	62,649	15,808
22,619	24,968	9,278
15,417	8,089	3,135
2,115	657	497
8,462	12,332	10,212
6,051	7,035	3,681
5,812	9,357	1,869
2,874	1,072	281
5,797	8,918	5,285
9,882	26,197	11,118
63,063	98,173	55,199
12,052	18,096	12,174
49,830	82,298	46,664
95,630	128,925	86,751
55,058	75,788	41,379
8,763	4,626	18,763
2,149	3,795	3,450
22,150	25,172	22,934
13,218	20,352	13,205
2,169	19,936	4,121
1,175	8,602	1,862
1,616	5,417	2,413
7,232	7,341	4,253
115,555	129,930	34,035
4,905	5,210	727
2,938	2,574	751
1,590	4,212	2,260
8,057	10,967	22,458
3,304	5,627	5,938
9,634	10,096	8,107
2,525	4,838	2,258
5,929	15,053	7,451
25,949	35,305	41,933
49,110	121,834	92,347
2,108	3,022	2,005
4,680	5,855	1,148
4,156	3,696	696
5,902	5,623	2,399
4,483	3,408	2,313
4,680	3,316	3,901
24,034	40,583	21,686
$1,579,894	**$1,911,409**	**$1,163,943**

Farm Equipment Exports by Type of Product

Product	Jan.-Dec. 1986 Quantity	Jan.-Dec. 1986 Dollar Value in Thousands	Jan.-Dec. 1987 Quantity	Jan.-Dec. 1987 Dollar Value in Thousands	Jan.-Dec. 1988 Quantity	Jan.-Dec. 1988 Dollar Value in Thousands	Jan.-June 1989 Quantity	Jan.-June 1989 Dollar Value in Thousands
Combines, pull-type	1,208	$25,192	1,734	$34,099	644	$9,766	446	$5,300
Combines, self-propelled	3,729	126,771	3,623	135,010	2,333	96,119	2,850	85,736
Cultivators, tractor-drawn or mounted	1,323	2,972	968	2,295	1,748	4,332	1,559	2,988
Cultivators, NEC, and Weeders	1,254	3,504	3,713	4,812	6,031	6,902	2,583	4,113
Farm Elevators and Blowers	1,877	3,847	1,498	3,795	1,866	5,326	NA	NA
Farm Wagons and Carts	1,877	3,847	1,197	2,041	1,863	4,490	1,060	1,957
Parts for Farm Wagons and Carts	—	701	—	952	—	709	—	1,475
Fertilizing Machines	6,375	13,831	4,461	9,772	5,055	10,906	6,347	8,864
Forage Harvesters	1,125	20,863	1,046	22,655	1,878	30,355	1,421	27,713
Harrows, Disk	866	3,111	920	3,524	1,316	4,649	1,308	3,265
Harrows, NEC, & Soil Pulverizers	3,014	3,505	4,688	5,030	8,786	8,145	3,661	3,223
Parts for Harrows, Stalk Cutters & Soil Pulverizers	—	3,745	—	3,816	—	3,293	—	2,848
Harvesting Machines, NEC	3,858	43,489	3,603	38,503	3,915	63,930	1,330	17,455
Harvesting Machine Parts	—	123,102	—	115,839	—	53,509	—	22,804
Hay Balers	4,311	31,340	5,429	41,400	9,033	54,993	5,948	37,659
Haying Machines, NEC (incl. rakes & tedders)	2,121	14,367	2,439	17,655	3,460	18,954	3,461	20,323
Parts for Haying Machine	—	12,766	—	15,703	—	23,278	—	10,911
Mowers, Cutterbar, tractor-drawn	1,475	3,138	985	3,042	1,659	4,930	3,904	6,297
Mowers, Rotary, tractor-drawn (excl. lawn mowers)	9,395	6,210	11,388	5,953	14,057	8,504	26,107	13,421
Mowers, NEC, tractor-drawn (excl. lawn mowers)	1,686	5,188	1,480	6,597	3,335	7,773	1,445	4,538
Planting Machines	1,799	7,342	2,134	7,216	1,818	7,152	1,946	6,142
Plows, Disk	672	1,418	669	1,651	597	1,511	259	847
Plows, Moldboard	480	1,765	1,380	4,358	1,122	4,320	166	763
Plows & Listers, NEC	2,486	6,627	4,247	7,609	4,369	9,083	2,443	7,460
Parts for Plows, Listers, Cultivators & Weeders	—	8,118	—	9,393	—	9,922	—	1,868
Seeding Machines	7,267	14,862	4,591	9,637	3,984	11,469	3,523	9,682
Parts for Planting, Seeding & Fertilizing Machines	—	11,888	—	9,763	—	17,761	—	8,010
Sprayers, Agricultural, including parts	—	136,554	—	179,147	—	227,752	—	139,705
Farm Tractors:								
Under 40 PTO HP	841	4,403	881	4,862	730	3,582	3,429*	15,502*
40-59 PTO HP	570	5,682	395	4,688	211	2,378	72	988
60-79 PTO HP	453	6,815	247	3,531	212	2,551	57	1,050
80-99 PTO HP	490	9,913	375	9,075	158	3,238	74	2,068
100-119 PTO HP	536	18,136	429	13,629	1,016	32,855	587	19,510
120-139 PTO	849	29,213	825	29,019	1,597	56,292	1,018	31,118
140-159 PTO HP	751	27,120	655	24,101	1,353	52,073	934	34,864
160-179 PTO HP	1,072	45,451	1,029	43,592	804	33,914	619	25,987
180 PTO HP & Over	1,175	75,166	912	59,430	1,016	56,686	888	45,110
Other Farm Tractors	1,525	21,961	2,544	26,711	2,306	31,617	1,331	14,335
Parts for Farm Tractors	—	454,098	—	517,150	—	680,695	—	303,738

SOURCE: U.S. Dept. of Commerce, International Trade Admin., Office of Capital Goods and International Construction. *1989 data appears to include garden-type tractors.

INDUSTRY UPDATE

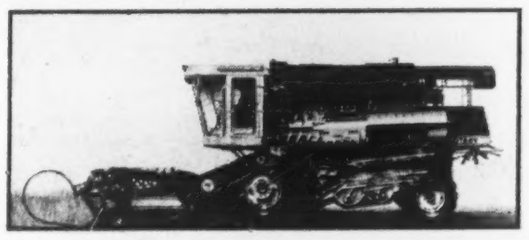
Rotary Combines From MF in 1990

Massey-Ferguson will introduce a Class VI rotary combine, the MF 8570, in 1990. The machine, with a 220-hp Cummins C diesel and a 220-bu. grain tank, will be made for MF by Western Combine Corp., a subsidiary of Linamar Machine Ltd. of Guelph, Ont., at Portage la Prairie, Man. It will be distributed with an MF label through MF dealers only, according to David Pitt, Massey president.

Linamar, a manufacturer of components and parts for the auto, farm and defense industries, received $5 million (Can.) in interest-free loans from the Canadian and Manitoba governments toward what was described as a $17 million development and assembly center.

Frank Pickersgill is president of Western Combine Corp.

The 8570 is an update of the 8560 rotary which was produced by Massey Combines Corp. before it went out of business. Western bought the rotary combine technology from Vicon, Inc., which



acquired it from the MCC receiver. When Vicon later decided not to go into production, Pickersgill left Vicon and formed Western.

Western will buy many of its manufactured parts from Linamar and will subcontract the assembly and some sheet metal manufacturing to Vicon in Portage la Prairie. Vicon is in a partnership with farmers who are members of Canadian Cooperative Implements Ltd.

Features of the 8570 include load-sensing hydraulics, hydrostatic four-speed constant-mesh transmission drive, and an exclusive direct crop discharge which eliminates the need for a beater. It comes with headers for major crops, including rigid grain tables up to 30 ft., flexible grain tables up to 24 ft., and six- and eight-row corn heads.

Earlier, MF had announced that Claas, West German combine maker with a base in Indiana, and MF's former Brazilian subsidiary would provide the company with conventional type combines.

CHANGES...

Roger D. Mayhew is new vice president, research and development, for Wasler Engineering, Inc., West Bend, Wis.

Combine Sales Continue To Outpace Year Earlier

UNIT RETAIL SALES

Equipment	October 1989	October 1988	% Change	January-October 1989	January-October 1988	% Change
Farm Wheel Tractors:						
2-Wheel Drive						
Under 40 HP	3,987	4,743	(15.9)	42,016	48,706	(13.7)
40 & Under 100 HP	3,107	3,354	(7.4)	29,911	28,372	5.4
100 & Under 140 HP	564	570	(1.1)	4,234	3,607	17.4
140 HP & Over	2,094	1,770	18.3	12,180	9,618	26.6
Total 2-Wheel Drive	**9,752**	**10,437**	**(6.6)**	**88,341**	**90,303**	**(2.2)**
4-Wheel Driver						
Under 200 HP	142	112	26.8	985	781	26.1
200 HP & Over	348	257	35.4	2,382	1,419	67.9
Total 4-Wheel Drive	**490**	**369**	**32.8**	**3,367**	**2,200**	**53.0**
Total Farm Wheel Tractors	**10,242**	**10,806**	**(5.2)**	**91,708**	**92,503**	**(.9)**
Combines (Self-Propelled)	1,711	991	72.7	7,137	4,881	46.2
Rectangular Balers (Bales under 200 lbs.)	388	374	3.7	6,696	5,356	25.0
Forage Harvesters (Shear Bar Type)	486	367	32.4	2,519	2,177	15.7
Mower Conditioners	740	740	.0	12,441	10,198	22.0

BRIEFLY...

Southern Turf Management will be the name of a new tabloid trade publication to be launched in January 1990 by Farm Press Publications, owner of *I&T*. STM will go to 15,000 grounds managers, parks administrators, sod producers, lawn care specialists and other professionals in 18 Southern states.

America's balance of trade in farm equipment moved to the favorable side for the first time in several years in July, according to the U.S. Dept. of Commerce. Exports for the first seven months were $1,364,620,000 and imports were $1,364,529,000. By the end of August, the balance had improved further: Exports for the year were $1.563 billion and imports were $1.529 billion.

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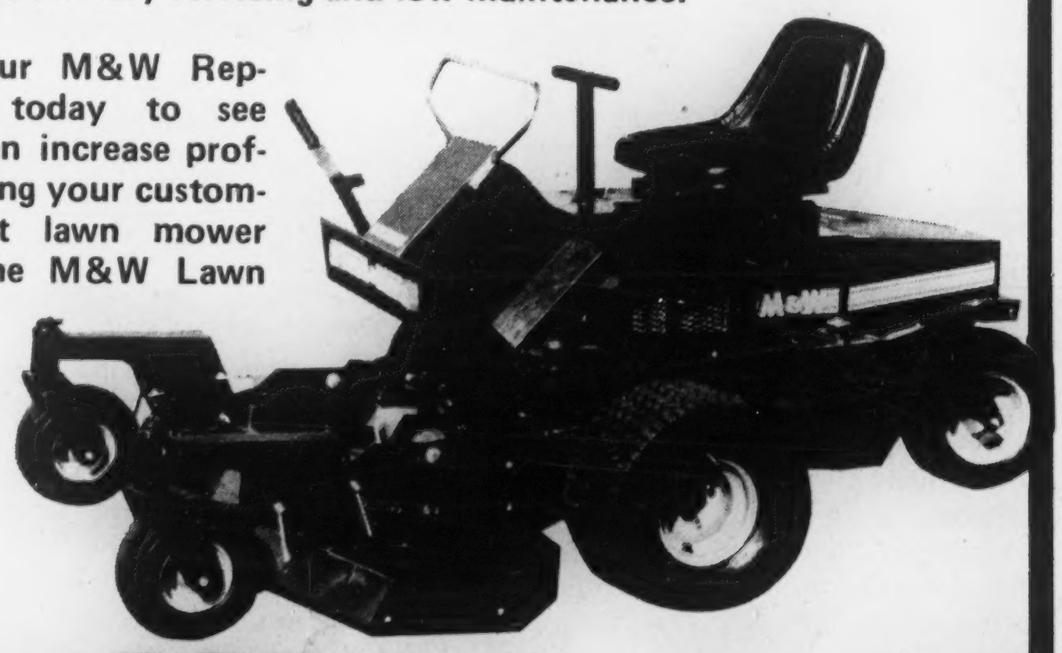

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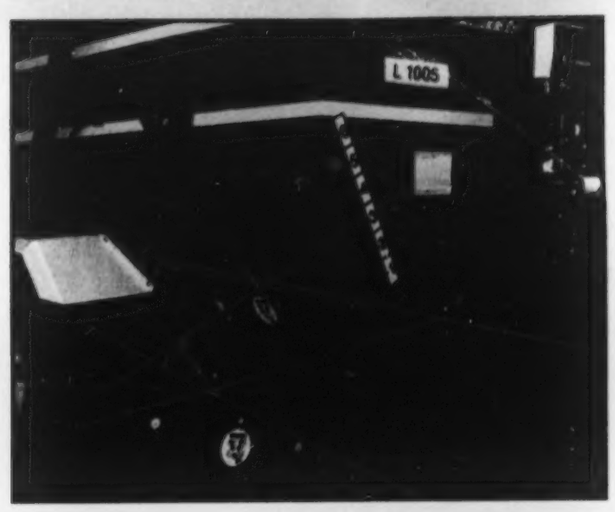

VOLUME 105 NO. 1 JANUARY 1990

Majors Start To Think Like Shortliners

By BILL FOGARTY

This being a new decade, it's time to take a look at some directions in which this business might be going. One of the ways to dispose of this task, of course, is to pull out various look-aheads of the past 30 years, update them slightly and put out the same boring platitudes.

You know what I mean: Bland stuff like fewer, larger, more efficient and businesslike farm operations; fewer dealers with bigger territories, more skills needed; fewer manufacturers; fewer suppliers to the manufacturers. A script like that has been good and safe for at least a generation.

Even so, it hasn't always been right. And sometimes the script has been right in ways the future-lookers didn't anticipate.

The forecasts about fewer, bigger farms were so consistent that many manufacturers in this business followed them like sheep. They were caught flat-footed by the burgeoning of part-time farmers with small operations. Yes, commercial operations got bigger and fewer, but off-farm income rolled into agriculture and kept this industry alive during the past decade.

Fewer manufacturers—that was true, too, but not by much. Companies and their product lines may change owners from

(More, pg. 4)

FEMA Convention

PACKED IN for a roundtable session on farm shows at the FEMA convention, shortline manufacturers indicate they need guidance in selecting and working the exhibition circuit. Story on Page 8.

Gehl Goes Public

Gehl Co., West Bend, Wis., which posted sales of over $120 million in 1988, is offering 2.2 million shares of its common stock at $14 per share. Of the total, 1.65 million shares are being sold by the company and about 550,000 by selling shareholders.

Net proceeds to the company will be used to reduce outstanding debt under its revolving loan agreement.

Blunt Ellis & Loewi Inc. and Robert W. Baird & Co. are handling the public offering. It is anticipated that Gehl Co. shares will trade on the NASDAQ national market system under the symbol GEHL.

New structure. The company has also established separate business units for its Agricultural and Industrial/Construction sectors, according to Bernard Nielsen, president and CEO, and three new executives have been added.

Gary L. Blinka is vice president

(See GEHL, pg. 2)

Deere's 1989 Tops $7 Billion Mark

Deere & Co.'s fiscal year ended Oct. 31 produced total sales of $7.22 billion, compared with $6.24 billion in 1988. Net sales of equipment came to $6.23 billion, up from 1988's $5.36 billion by 16 percent. Net 1989 income was $380 million, compared with $315 million a year earlier.

For the fourth quarter, sales were $2.0 billion, vs. $1.72 billion in 1988's comparable period. Sales of equipment to dealers were $1.74 billion in the quarter, up 17 percent. Earnings were $103 million for the 1989 fourth period, $80.5 million in 1988's last quarter.

Deere said that fourth quarter results were affected by a strike at its Horicon, Wis., works, where lawn and garden equipment is made.

Net income of credit, insurance and health care operations in 1989 was $124 million.

Deere announced that initial production tonnage has been scheduled about 5 percent higher in 1990 than actual 1989 output, with the largest increases going for lawn and grounds care and agricultural equipment. There will be lower production overseas and lower component production for outside sales, due primarily to Deere's sale of its recreational vehicle chassis business.

In a joint statement, Chairman Robert Hanson and President/CEO Hans Becherer said that retail sales of Deere equipment are expected to be higher in 1990. "Further declines in interest rates could result in an improved level of housing starts during 1990. Non-residential and public construction are anticipated to show small gains in the coming year."

Dealer receivables at the end of the fiscal year were $2.59 billion compared to $2.28 billion a year earlier. Inventories were at $711 million, up $3 million. Credit receivables rose from $2.97 billion in 1988 to $3.31 billion.

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Inside

DEPARTMENTS

What They're Saying	3, 24
Books	5
Industry Update	6
Product News	20
I&T Marketplace	21

FEATURES

EMI and LISA	2
Corn for Horsepower	7
FEMA Convention	8
Wholesalers Meet	10
AIMRA Report	12
Changes in Sales Job	14
Sales Leads	15
Italian Specialties	16

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WHAT THEY'RE SAYING

If We Can't Make A Profit From It, We Should Quit

Peter Nunn is president of BAGMA, the British dealer association. He recently said the following in his association's publication.

Few of our customers genuinely appreciate the service that has been available to them over the harvest months. Our staffs have all been working long and often unsocial hours during which they have exhibited a tremendous loyalty to their company and commitment to their trade.

During this time they have been paid more but enjoyed few bouquets. They have accepted dislocated meal times, gone without a meal, and taken jibes and even abuse from the irate and impatient farmer who often becomes totally irrational at the time of a machine's breakdown.

How often one hears, "I don't expect you to stock everything, but I can't understand why you haven't got one of these." That customer may never imagine that a partsman may have to spend a whole morning on the phone trying to locate a particular part, during which time he's not available to serve anyone else....

The farmer enjoys a service from his machinery supplier which is only beaten by the police, fire service and ambulance service. We are not given enough credit for it. Neither do our charges properly reflect its worth.

If our service operation cannot make a useful profit contribution when our specialist skills are most in demand, we don't deserve to be in business. □

BRIEFLY...

The Soil and Water Conservation Society has given a Merit Award to Fleischer Mfg., Inc., Columbus, Neb., for "activities that notably advance the science and art of good land and water use," specifically for its development of the Buffalo line of ridge-till equipment.

Westfalia Systemat, Elk Grove Village, Ill., maker of dairy equipment and accessories, and Kipe Steel, Chambersburg, Pa., which produces dairy stalls, have formed a business venture to market the Westfalia/Kipe Side-by-Side milking parlor.

Ingersoll Products Corp., Chicago, has named Godrey Group, Chicago, as its advertising agency of record. Ingersoll claims to be the world's largest manufacturer of agricultural disk blades.

L.R. Hoerneman is new executive director, depot operations, for the Parts Div. of J I Case's Parts & Components Group. The 25-year Case veteran is responsible for all depots in Europe and North America as for materials management in Europe and the Logistics Task Force.

Trail King Industries, Mitchell, S.D., has named Don Koebnick as Midwest district manager. He is also responsible for overseeing new dealer development and dealer training.

Promark Products, Inc., City of Industry, Calif., has acquired Turf Vac Corp. and its line of towable and riding turf and pavement vacuums. Promark makes tree-related maintenance equipment.

Yetter Mfg. Co., Colchester, Ill., is asking companies in the industry to donate one or more of their logo-bearing caps. The caps will be auctioned next Labor Day weekend with all proceeds to go to the Jerry Lewis Muscular Dystrophy Assn. Further details: Pat Whalen, marketing vice president, Yetter, 309/776-4111.

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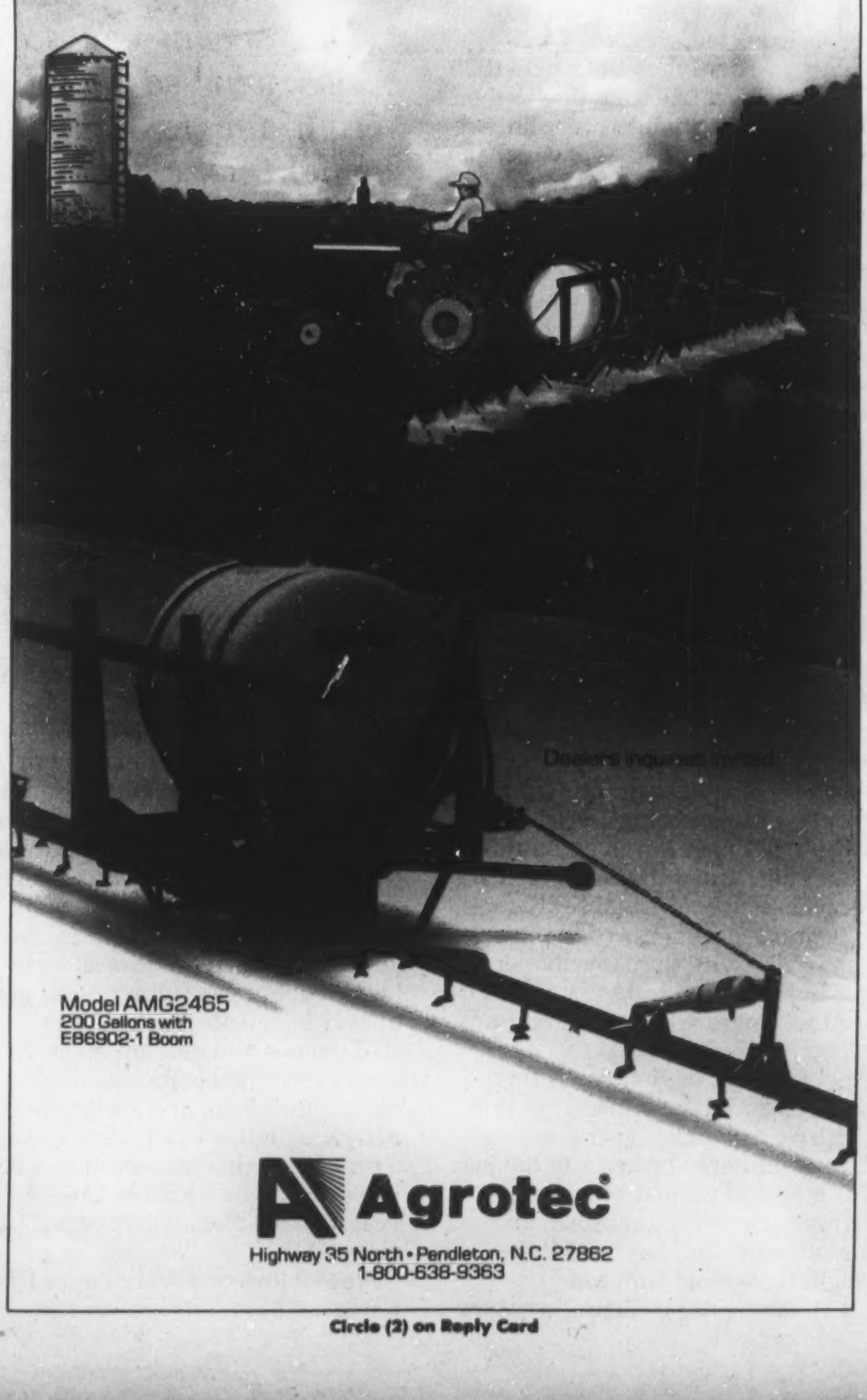

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